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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,926	03/11/2004	Jeffrey C. Smolinske	CE11925R	6906

22917 7590 11/14/2005

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EXAMINER	
PATEL, JAY P	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/798,926	SMOLINSKE ET AL.	
	Examiner	Art Unit	
	Jay P. Patel	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,10-13 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1-3, 6 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over King (US Patent 6873597 B1) further in view of Argyropulous et al. (US Publication 2005/0159165 A1).

3. In regards to claims 1, King teaches determining, by the PCU, a data traffic level which is an amount of data that will need to be conveyed by the backhaul link for transmission during the transmission period, assuming that wireless unit coding schemes are maximized according to present wireless channel conditions. King discloses a communication system in which the data rate can be reduce. King discloses that when data tones are detected in the voice band, the coding scheme is changed automatically to provide a 64 kbits/s PCM coded channel, thereby making the system fully transparent to all PSTN voiceband data modems (see column 3, lines 40-43). The 64kbits/s is the maximum code scheme used for data type signals.

In further regards to clam 1, King also teaches when the data traffic level is greater than the link capacity, reducing a coding scheme of at least one wireless unit for the transmit period in order to reduce the data traffic level to fit within the data capacity of the backhaul link. King discloses that as the number of subscriber channels in use at

any one time increases to above a present threshold, the capacity management module implements a progressively reduced rate coding scheme (column 4, lines 50-55).

King fails to teach however, determining by a packet control unit (PCU), a link capacity of a backhaul link for conveying data to be transmitted during a transmit period. Argyropoulos teaches the above-mentioned limitation in his disclosure, which is targeted toward provisioning resources for a backhaul link. Argyropoulos discloses that the first set in the method is to estimate the amount of backhaul bandwidth needed per air interface time slot (see page 2 paragraph 20).

Therefore it would have been obvious to one skilled in the art to combine the data rate reduction scheme disclosed by King with the backhaul link provisioning method disclosed by Argyropoulos. The proper motivation comes from Argyropoulos where it is sated "Because the type of coding algorithm used depends on interference conditions at the air interface, variations in the coding algorithms used over a given period of time can be used to accurately determine the amount of bandwidth that will be required on the backhaul link" (see page 1, paragraph 7).

In regards to claims 2 and 12, Argyropoulos also teaches the transmit period comprising a period in which a plurality of air interface timeslots are concurrently transmitted. Argyropoulos discloses in figure 3, a graph illustrating the probability that a given MCS coding scheme is being used to encode data transmitted over one channel of the air interface over a given period of time (see page 2, paragraph 21).

In regards to claims 3 and 13, Argyropoulos also teaches the backhaul link comprising a link between the PCU and a BTS. Argyropoulos discloses in figure 1 a backhaul link 10 between the BSC 5 and BST 2.

In regards to claim 6, King teaches reducing the coding scheme or at least one wireless unit for the transmit period comprising reducing the data rate at which data will transmitted to at lease on wireless unit during the transmit period. King discloses that as the number of subscriber channels in use at any one time increases to above a present threshold, the capacity management module implements a progressively reduced rate coding scheme (column 4, lines 50-55).

4. In regards to clam 11, Argyropoulos teaches a PCU interface to send and receive messaging using a plurality of communication protocols. Argyropoulos discloses that the data to be transmitted is encoded and decoded by the BSC (see page 2 paragraph 17, last sentence).

In further regards to claim 11, all the other limitations are drawn to an apparatus which carries out the method of claim 1; therefore the disclosure used with regards to claim 1 is also applicable to claim 11.

5. Claims 10 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over King and Argyropoulos as applied to claims 1 and 11 above, and further in view of Galyas (US Patent 6687226 B1).

6. In regards to claims 10 and 18, King and Argyropoulos teach all the limitations of claims 1 and 11 as stated above. Neither King nor Argyropoulos teach at least one

wireless unit having a lowest QoS priority as compared to other wireless units targeted with data during the transmit period. Galyas reveals that the PCU is responsible to prioritize which one of the two users that send a communication at the same time will be given priority and that the threshold delay value can be calculated based on QOS requirements which are used to set priorities (see column 3 lines 28-30, column 6 lines 38-41 and column 7 lines 43-50). Therefore, it would have been obvious to one skilled in the art at the time of the invention to combine the data rate reduction scheme disclosed by King with the backhaul link provisioning method disclosed by Argyropoulos along with the QoS prioritization disclosed by Galyas. The proper motivation comes from Galyas where it is stated "there is a need for a communication system and method capable of effectively handling a situation where an increase in traffic volume temporarily overloads the terrestrial links in the IP based BSS" (see column 1, lines 57-60).

Allowable Subject Matter

7. Claims 4-5, 7-9 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments with respect to claims 1-3, 6, 10, 11-13 and 18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPP 11/10/05
Jay P. Patel
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Art Unit 2666